

**PRELIMINARY ASSESSMENT/SITE INSPECTION REPORT  
AND AOC/SWMU ASSESSMENT REPORT**

**UNIT NUMBER:** 491

**UNIT NAME:** Mercury Spill at the C-611 Water Treatment Plant Vault

**DATE:** 10/15/01

**REGULATORY STATUS:** AOC

**LOCATION:** C-611 Water Treatment Plant

**APPROXIMATE DIMENSION:** The mercury spill within the vault was in the form of small droplets over an area approximately 2-feet in diameter. The mercury that escaped during excavation covered a 3' x 5' area, also in small droplets.

**FUNCTION:** The vault contains process piping used in support of the plant water treatment system.

**BRIEF HISTORY:** During construction activities to replace sanitary water valve L2 and other valves and piping at C-611, a contractor was boring a hole at the floor level through the west wall of the No. 2 sanitary water flow meter valve. During the drilling activities, legacy mercury was discovered when it flowed out of the vault with the water that was trapped on the vault floor. The area had been concealed by the mud and water covering the floor. At one time, the vault was used to hold mercury-filled flow measurement instrumentation. The mercury-filled instrumentation was removed in the 1970s.

**OPERATIONAL STATUS:** Active. At this time, flow measurement instrumentation exists in the vault. This instrumentation does not contain mercury.

**DATES OPERATED:** 1951 - Present

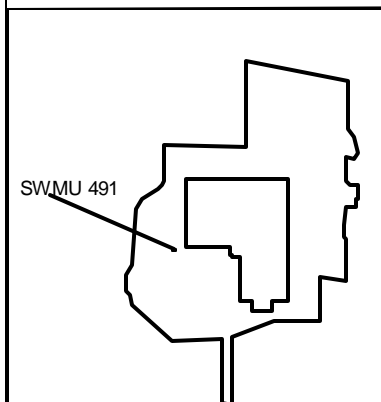
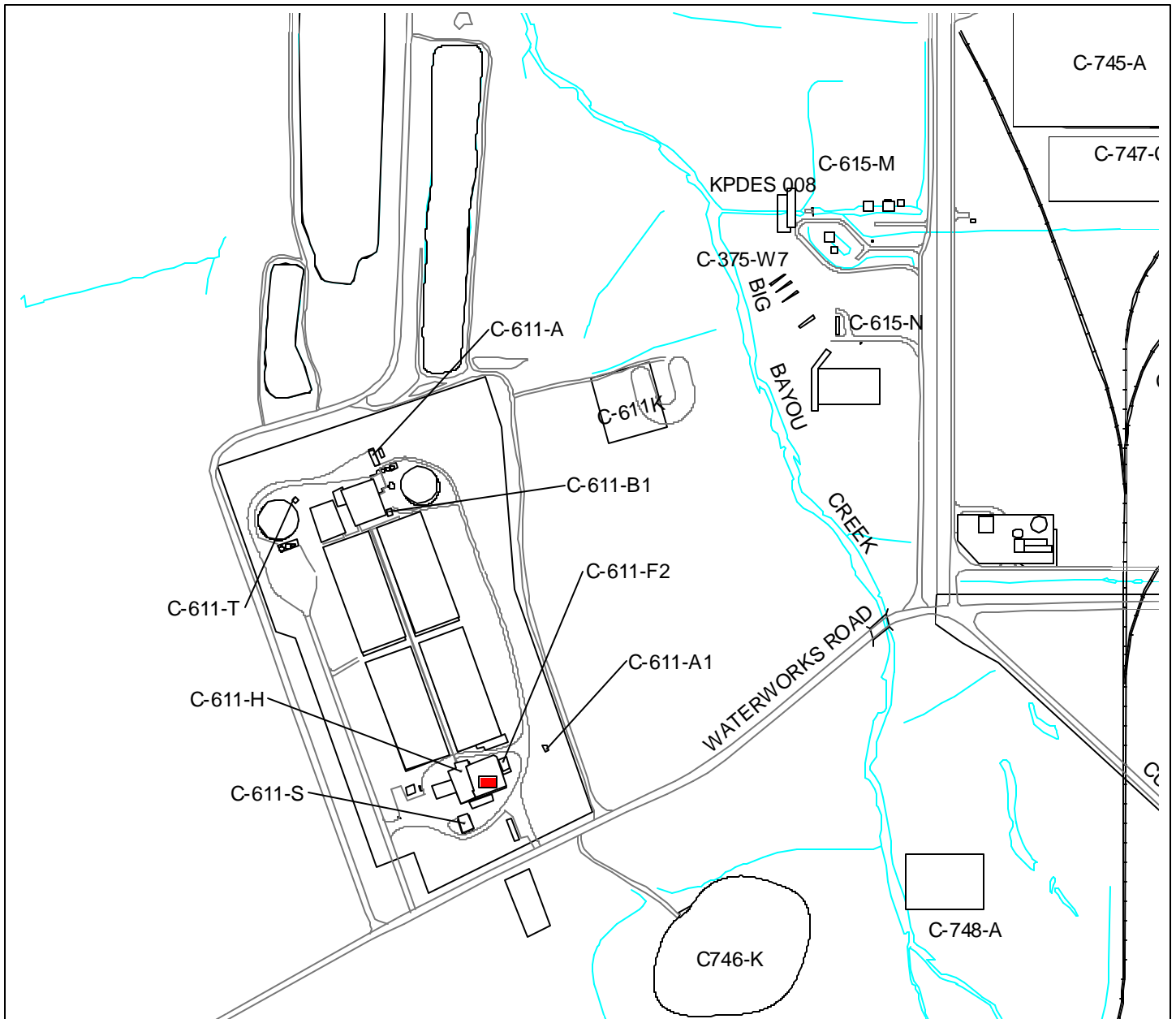
<b>SITE/PROCESS DESCRIPTION:</b>	PGDP water treatment facility. This facility processes drinking water as well as other water types for plant use.
<b>WASTE DESCRIPTION:</b>	Waste collected at this site includes mercury collected in a hand held pump, which is designed specifically for the collection of free mercury. Mud and mercury combined from the vault and excavation area, water from excavation area, soil, and personal protective equipment (PPE) are also wastes collected from this incident.
<b>WASTE QUANTITY:</b>	Approximately 6-8 ounces of liquid mercury was collected. One 5-gallon bucket of soil, one 30-gallon bucket of mud and mercury mixed (collected from the inside of the vault), one 30-gallon bucket of PPE, and one 55-gallon drum of water. The water was collected in the excavation area. A small amount of mercury had escaped into the excavation area and the area was pumped out.
<b>SUMMARY OF ENVIRONMENTAL SAMPLING DATA:</b>	No data is available at this time. The waste samples are being analyzed.
<b>DESCRIPTION OF RELEASE AND MEDIA AFFECTED:</b>	Liquid mercury was released into the soil. The spill was contained and the contaminated soil was removed from the area.
<b>GROUNDWATER:</b>	NA
<b>SURFACE WATER:</b>	NA
<b>SOIL:</b>	NA
<b>ECOLOGY AFFECTED (i.e., endangered/threatened species):</b>	NA
<b>DOCUMENTATION OF NO RELEASE:</b>	NA
<b>IMPACT ON OR BY OTHER SWMU/AOC:</b>	SWMUs located nearby are 79, 130, 131, 132, 133, 134, and 187.

**PRG COMPARISON:**

NA

**RFI NECESSARY:**

No. Mercury was contained within the vault and the release was immediately cleaned-up. No evidence of release to the environment was present.



## LEGEND:

- AOC 491 Area
- Buildings

300 0 300 600 Feet



## U.S. DEPARTMENT OF ENERGY

DOE OAK RIDGE OPERATIONS

PADUCAH GASEOUS DIFFUSION PLANT



BECHTEL JACOBS COMPANY LLC  
 MANAGED FOR THE U.S. DEPARTMENT OF ENERGY UNDER  
 U.S. GOVERNMENT CONTRACT DE-AC-05-98OR22700  
 Oak Ridge, Tennessee Paducah, Kentucky Portsmouth, Ohio

**CDM** Federal Services Inc.  
 A subsidiary of CDM Global Programs Corporation

AOC 491 Mercury Spill at the C-611 Water Treatment Plant Vault

FIGURE No. c5ac90002sk.apr  
 DATE 10-22-01



SWMU 491 Mercury Spill at the C-611 Water Treatment Plant Vault